

NEC

Authentic series

MODEL A350E (SS)

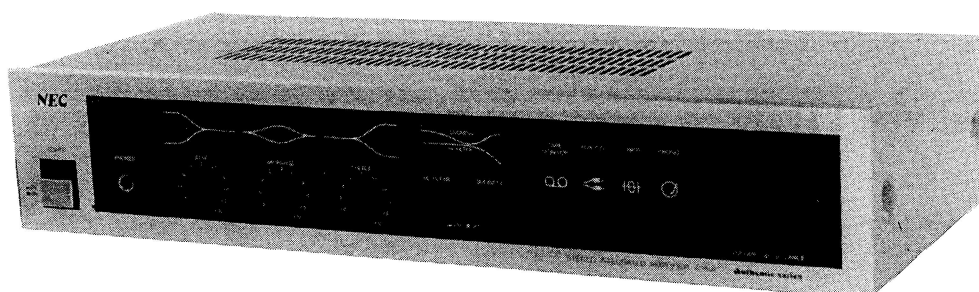
STEREO AMPLIFIER

SERVICE MANUAL

ORDER NO. 499-91-0268



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SPECIFICATIONS

Amplifier A350E	
Output Power	30W x 2 (8 ohms)
Total Harmonic Distortion	0.5%
Input Sensitivity/Impedance	
Phono	2.5mV/47k ohms
Aux	150mV/47k ohms
Frequency Response	
Phono	30Hz — 15kHz
Bass Control	±8dB (100Hz)
Midrange Control	±5dB (1kHz)
Treble Control	±9dB (10kHz)
High Filter	—3dB (7kHz)
Dimensions	430 (W) x 70 (H) x 190 (D) mm
Weight	4.3 kg

NEC Corporation

TOKYO, JAPAN

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INFORMATION

A350E is one of the components in the system (composed) of T350E or T351E and K350E. As the Deck and the Tuner receive the power supply from the Amplifier by the Din code. Be careful of connections.

SWITCHES & CONTROLS

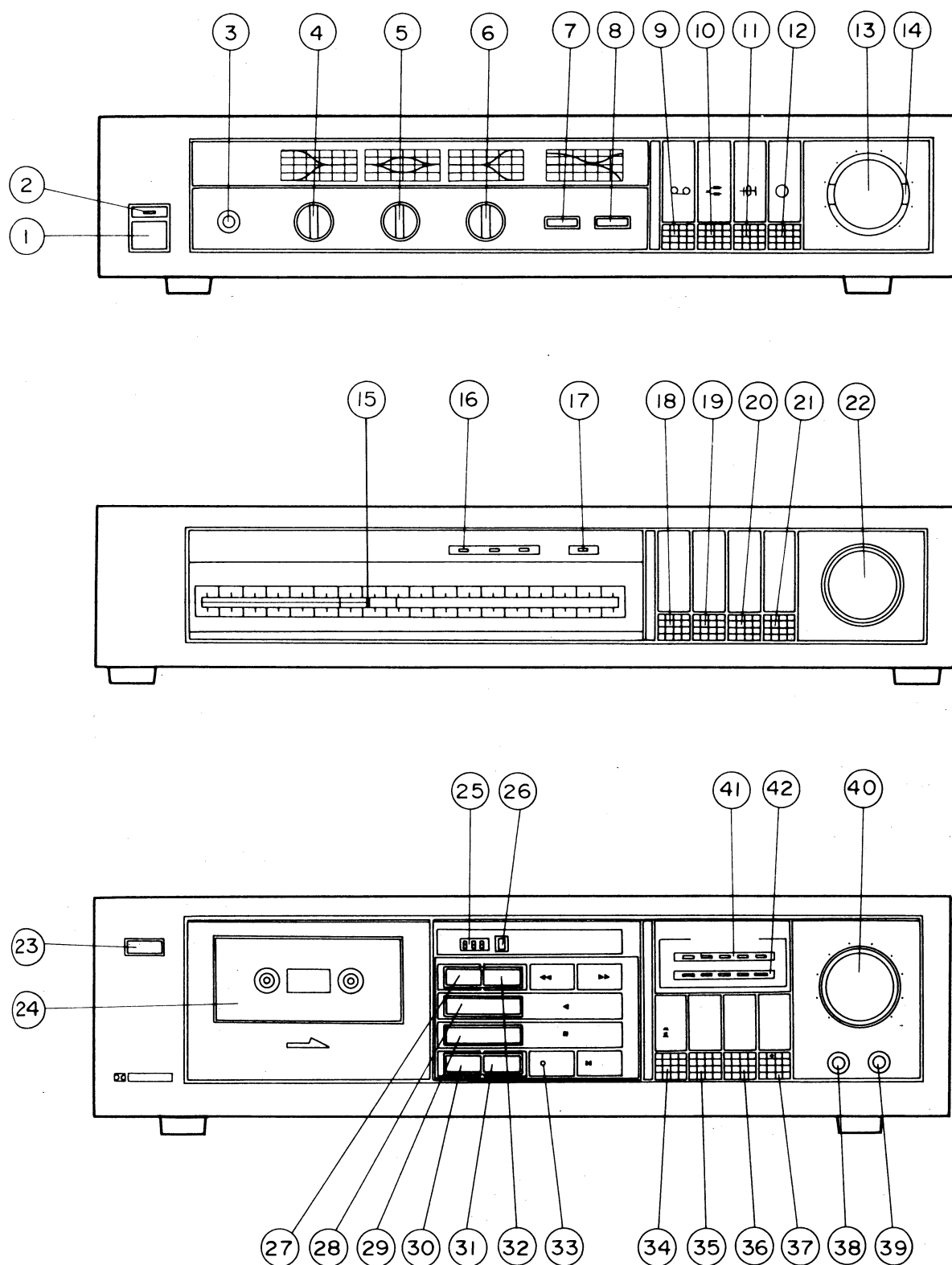


Fig. 1

IMPORTANT ON POWER SUPPLY

For A350E SS type

AC power supply is 220V 50Hz only.

For A350E SC type

AC power supply is 120V 60Hz only.

For A350E SA type

(Wiring Instruction for United Kingdom users Mains plug)

The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the latter N or coloured black:

The wire which is coloured brown must be connected to the terminal which is marked with the latter L or coloured red:

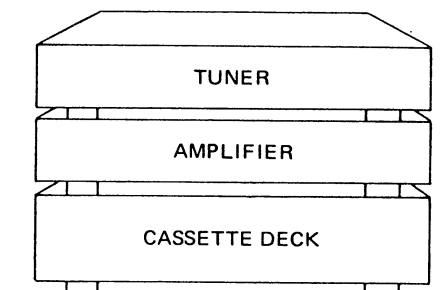
If you are in any doubt concerning these connections, consult a qualified electrician.

T350E (or T351E), K350E

By connecting the Signal & Power supply cord to A350E DC power will be supplied from A350E.

The power supply will not be operational unless it is connected to A350E.

Note: When setting controls of the units, use the following order; tuner, amplifier, cassette deck.



I DESCRIPTION (See Fig. 1)

- | | | |
|---|--|--|
| ① Power switch | ②① Key for reception of MW (AM) | ④⑤ Coaxial cable |
| ② Power on indicator | ②② Key for reception of FM | ④⑥ AM antenna |
| ③ Headphones connection jack | ②③ Tuning control knob | ④⑦ AM ferrite bar antenna |
| ④ Tone "BASS" control | ②④ Key for operating cassette compartment door | ④⑧ Signal & power supply cord (T350E or T351E) |
| ⑤ Tone "MIDRANGE" control | ②⑤ Cassette compartment door | ④⑨ "GND" ground terminal for connection of turntable |
| ⑥ Tone "TREBLE" control | ②⑥ Tape counter | ④⑩ "PHONO" plug for connection of turntable with magnetic cell |
| ⑦ "HI-FILTER" switch | ②⑦ Counter reset key | ④⑪ "TUNER" socket for connection of T350E (or T351E) |
| ⑧ "LOUDNESS" switch | ②⑧ Rewind key | ④⑫ "AUX/VCR" plug for connection of a tape-recorder, VCR or DAD player |
| ⑨ "TAPE MONITOR" key | ②⑨ Playback key | ④⑬ "TAPE MONITOR" socket for connection of K350E. |
| ⑩ Auxiliary key | ②⑩ Stop key | ④⑭ Terminal for connection of right-hand speaker system |
| ⑪ Radio key | ②⑪ Record key | ④⑮ Terminal for connection of left-hand speaker-system |
| ⑫ Phonograph key | ②⑫ Pause key | ④⑯ Mains plug |
| ⑬ "VOLUME" control | ②⑬ Fast forward key | ④⑰ Signal & power supply cord (K350E) |
| ⑭ "BALANCE" control | ②⑭ Record indicator | ④⑱ Antenna terminals |
| ⑮ Transmitters selection pointer and indicator light | ②⑮ Dolby NR* key: switching on and off of noise reduction circuit. | |
| ⑯ Light assembly monitoring FM and AM reception level | ②⑯ Key for Normal tapes | |
| ⑰ Indicator light monitoring reception of stereo broadcast | ②⑰ Key for Chrome tapes | |
| ⑱ Key for mono or stereo reception (T351E only) | ②⑱ Key for Metal tapes | |
| ⑲ Key for mono stereo reception with FM muting (T350E only) | ②⑲ Left channel microphone connection jack | |
| ⑲ Key for FM muting. (T351E only) | ②⑲ Right channel microphone connection jack | |
| ⑲ Key for reception of LW (T350E only) | ②⑲ Recording level adjustment | |
| | ②⑲ Left channel recording level indicator | |
| | ②⑲ Right channel recording level indicator | |
| | ②⑲ T-shaped antenna | |
| | ②⑲ FM external antenna | |

DIAGRAM OF CONNECTIONS

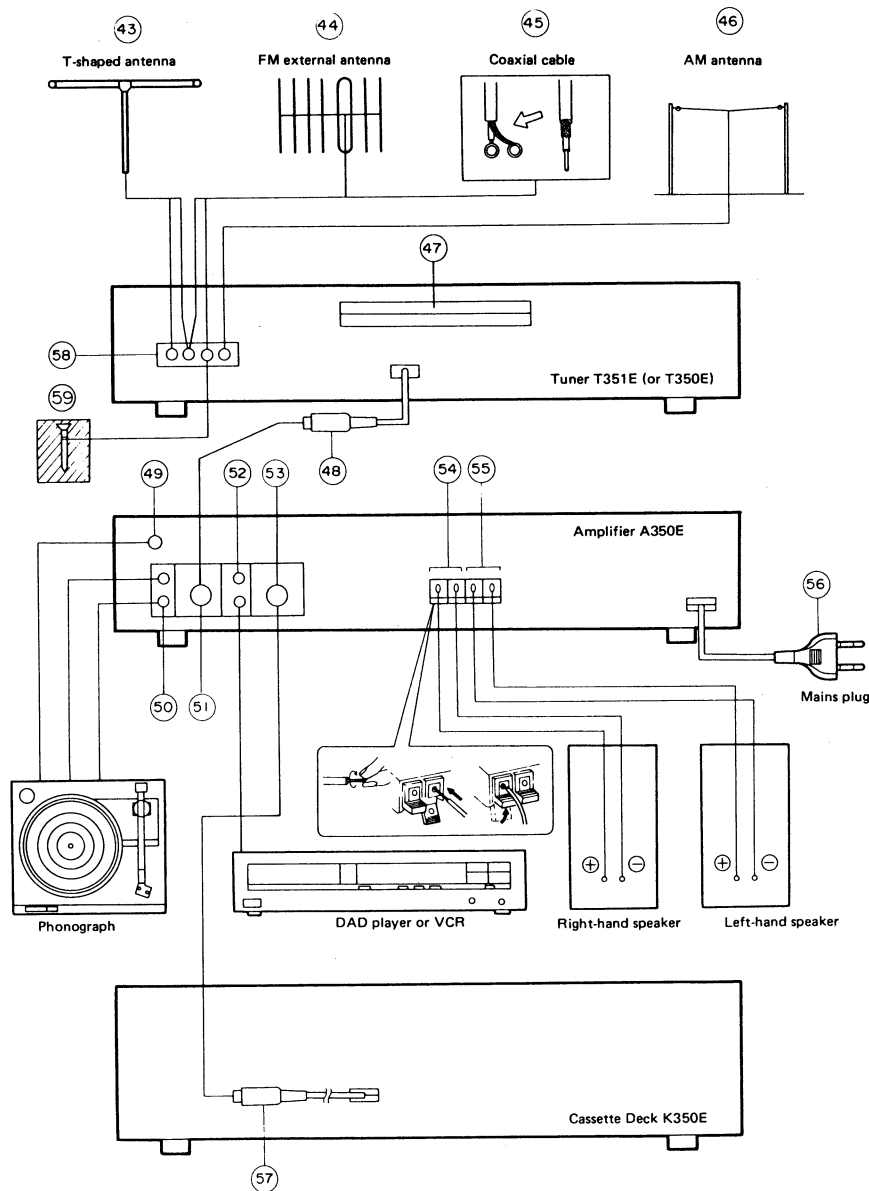


Fig. 2

CAUTIONS

- Avoid installing the unit in location described below:
- Places exposed to direct sunlight or close to heat radiating appliances such as electric heaters.
- Places subject to constant vibration.
- Humid or damp places.
- Do not touch the magnetic heads with a screwdriver and other metal objects, or bring magnets close to them.
- If the power supply voltage fluctuates more than $\pm 10\%$, it may affect the performance of the unit and eventually lead to a breakdown.
- Use soft and dry cloth to wipe the cabinet. Never use thinner or similar

solvents to clean the cabinet, and avoid spraying any insecticide containing thinner.

- Try to keep the magnetic heads clean at all times.

II CONNECTIONS (See Fig. 2)

CONNECTIONS FOR THE AMPLIFIER "A350E"

■ Connection of Speaker System

The speaker systems must have an impedance of 8 ohms or more and their admissible power level must be a minimum of 30W.

Connect the speaker on terminals:

- (54) for right-hand speaker system
- (55) for left-hand speaker system

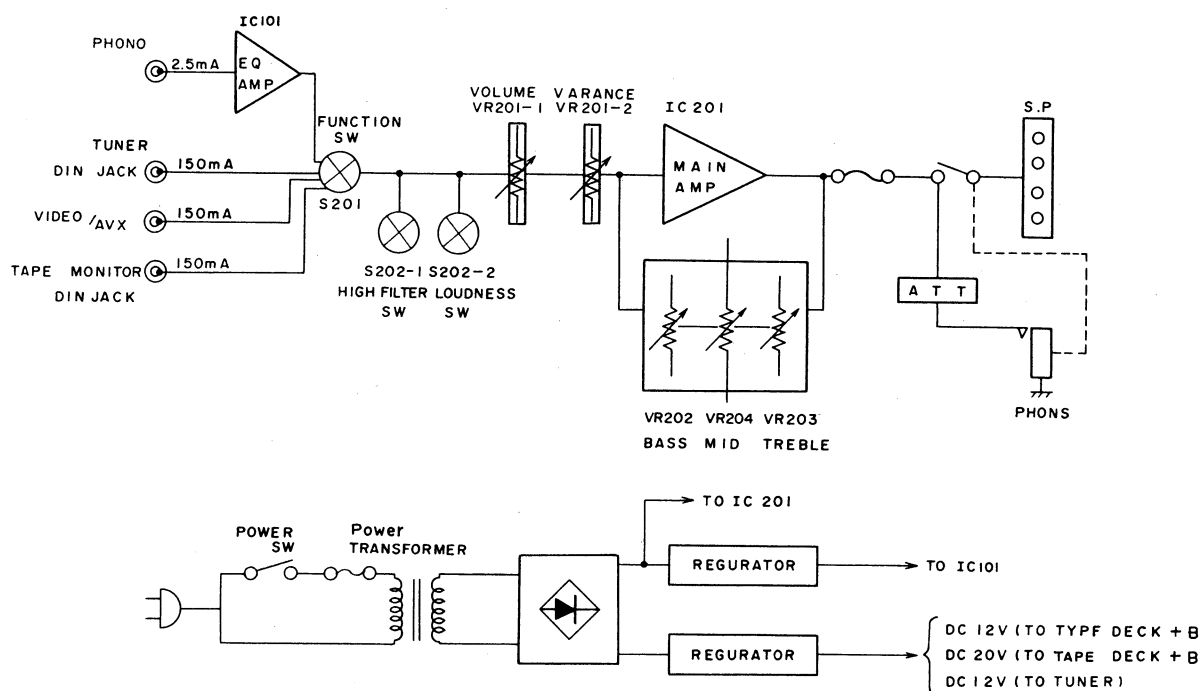
■ Source Signal Connections

1. Tape Deck "K350E"
Connect the signal and power supply cord (57) to "TAPE MONITOR" socket (53).
2. Tuner "T351E (or T350E)"
Connect the signal and power supply cord (48) to "TUNER" socket (51).
3. Turntable with Magneti Cartridge
Connect the turntable to plug (50) "PHONO". Connect the ground wire of the turntable to terminal (49) "GND".
4. DAD Player or VCR etc.
Connect the instrument to plug (52) "AUX/VCR".

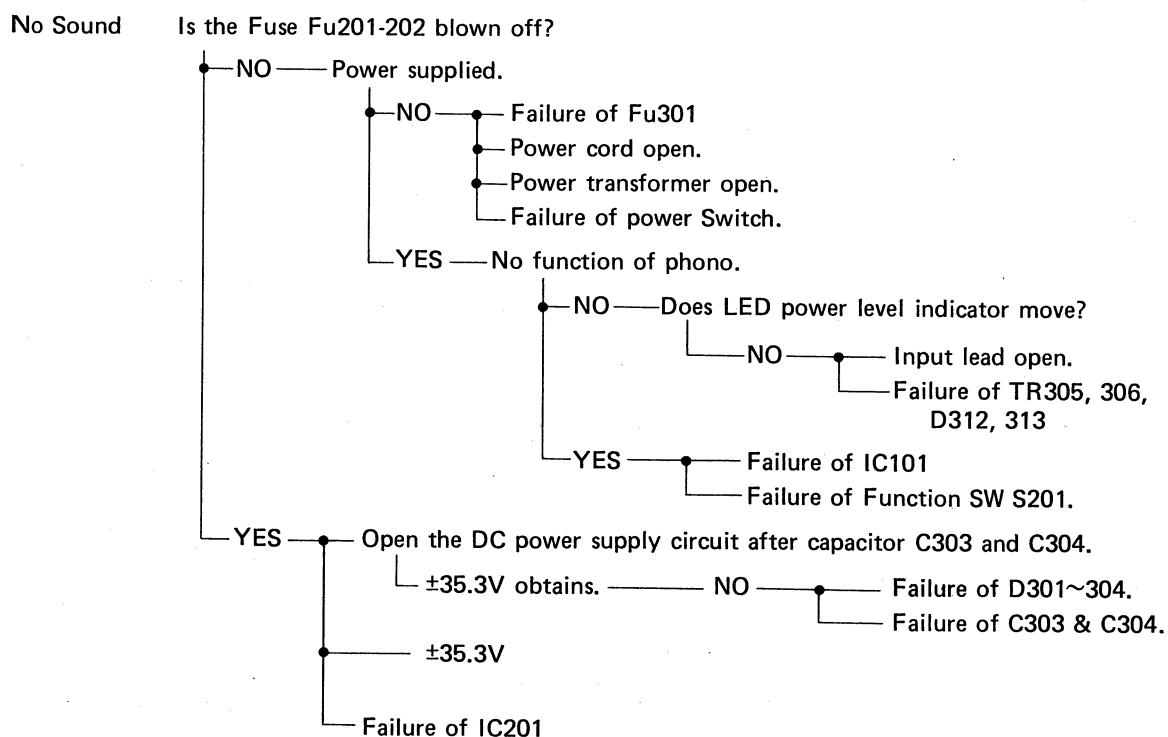
■ Mains Connection

Connect the plug (56) of the power cord to wall AC outlet.

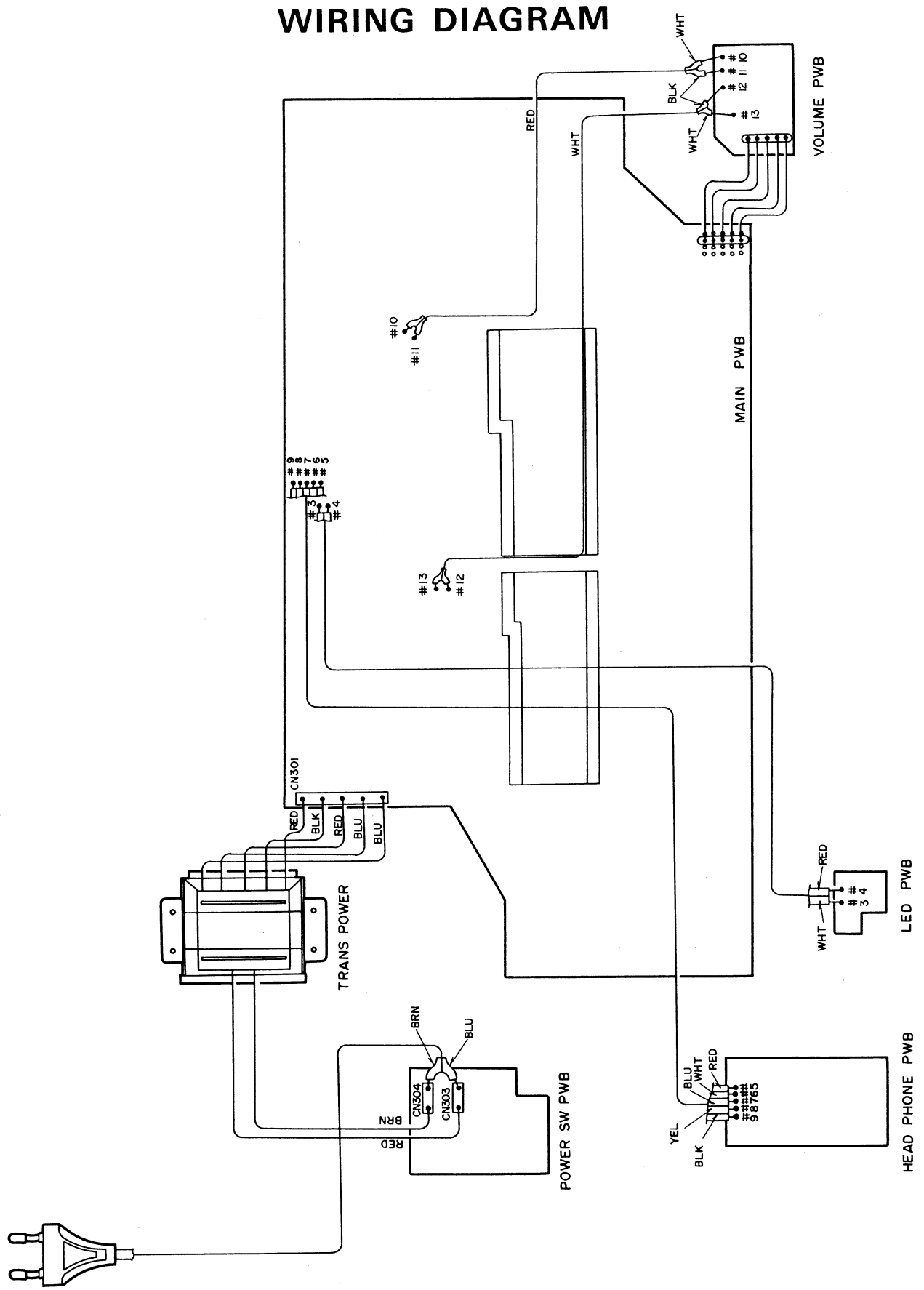
BLOCK DIAGRAM



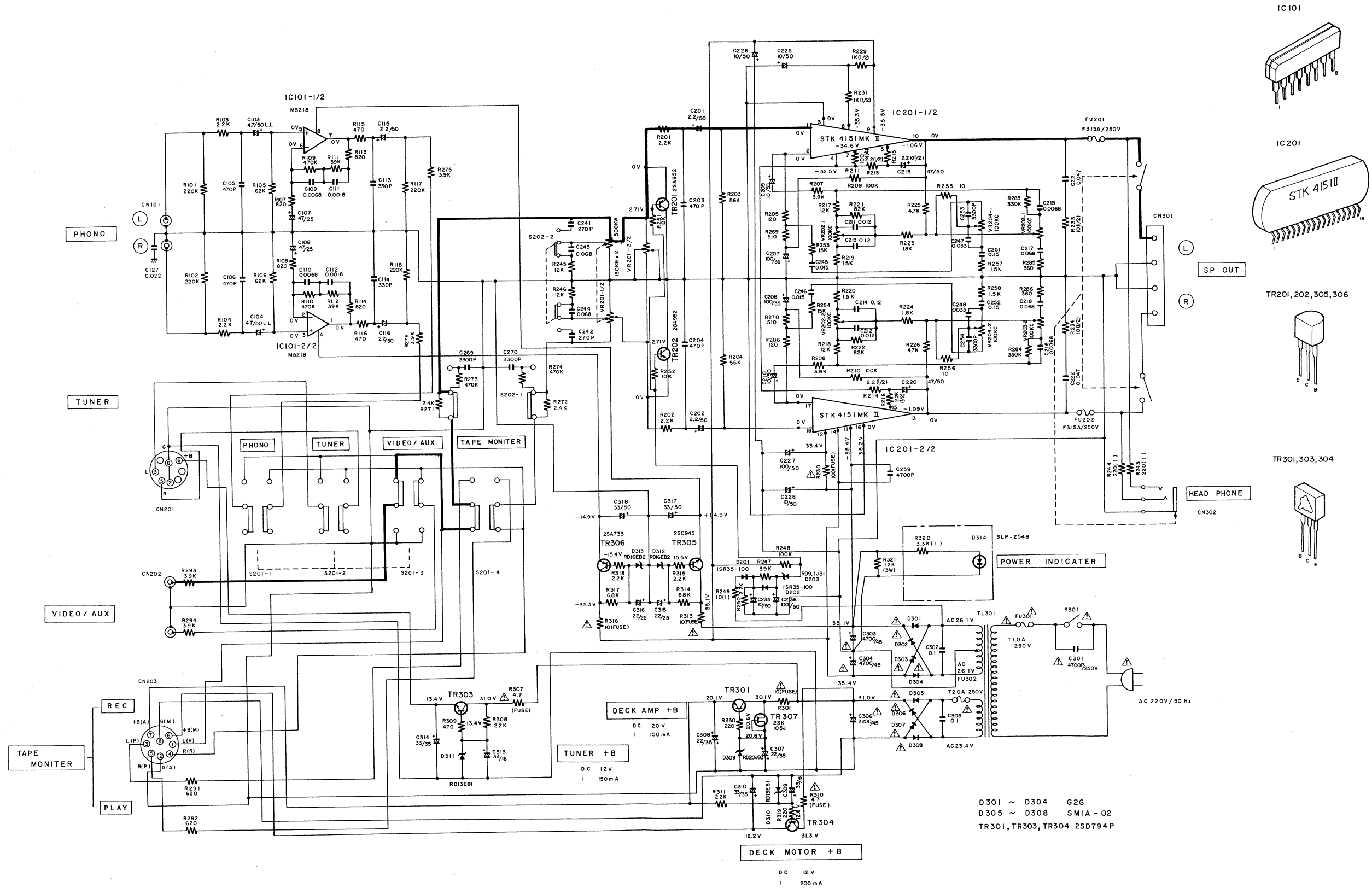
TROUBLE SHOOTING



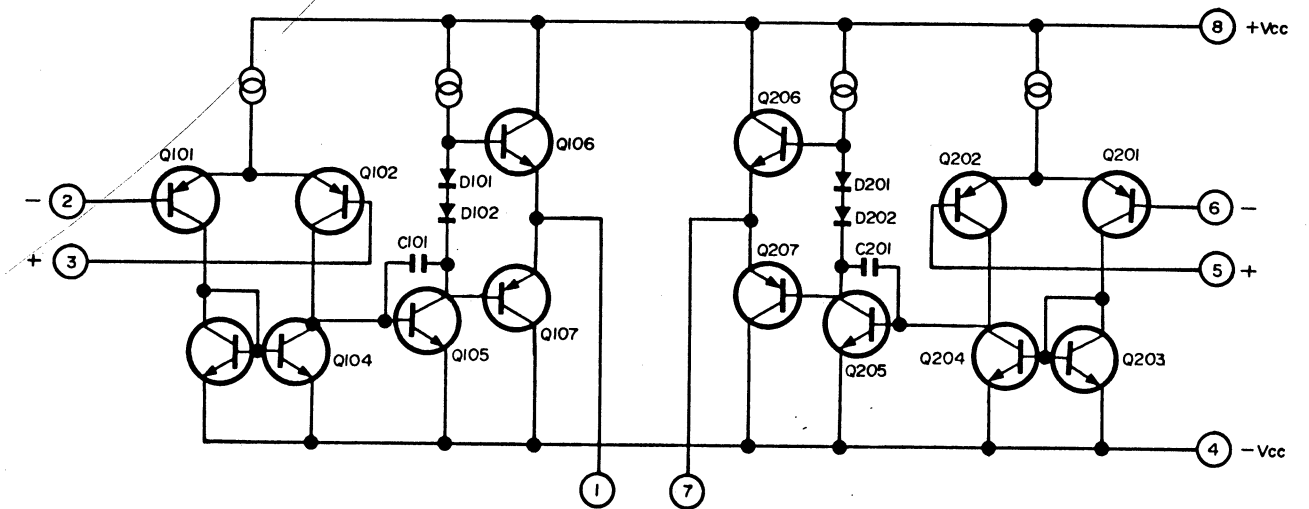
WIRING DIAGRAM



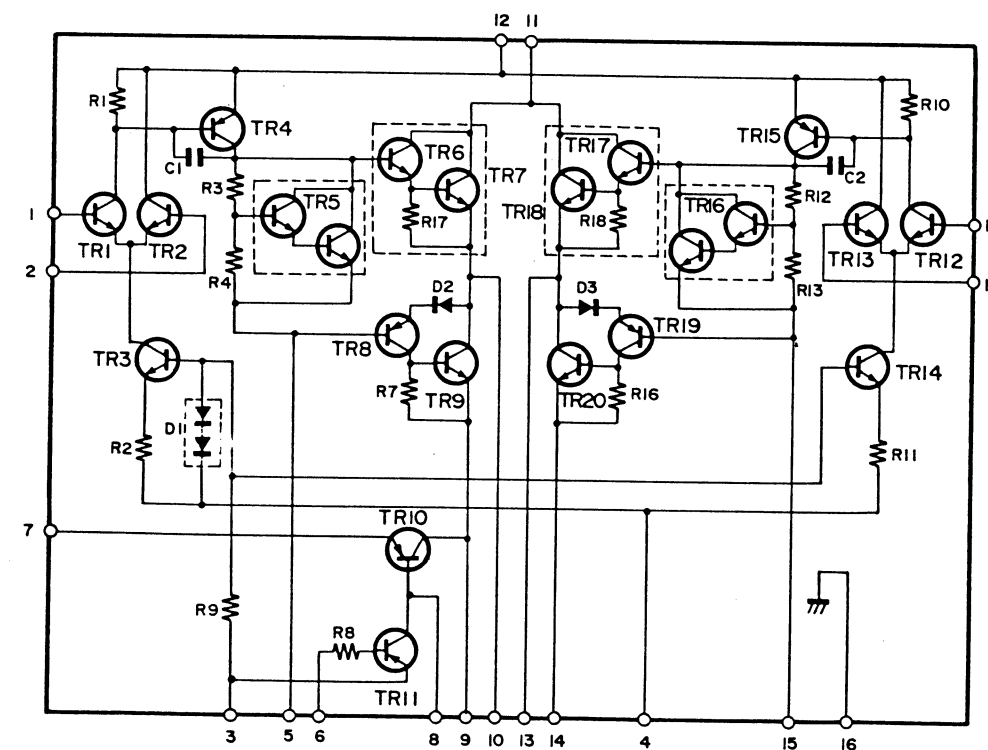
SCHEMATIC DIAGRAM



IC BLOCK DIAGRAM

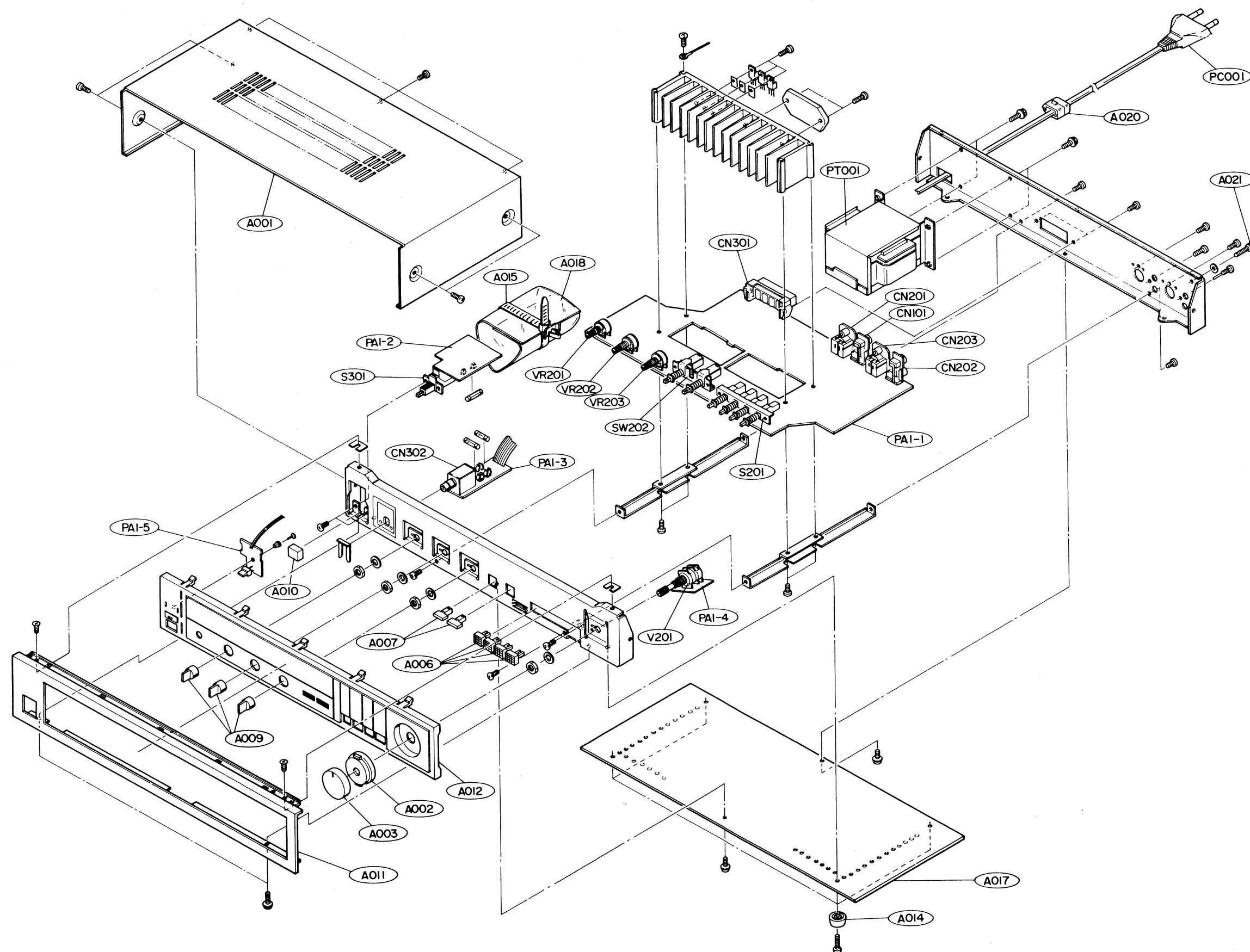


IC101
M5218L



IC201
STK 4151 II

EXPLODED VIEW OF SET



REPLACEMENT PARTS LIST

Note : Replacement parts which have special safety characteristics
are identified by Δ on the schematics.

SYMBOL	PARTS NO	DESCRIPTION	QTY
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*** ICS ***

IC101	37901081	IC M5218L	1
IC201	37901156	HIC STK415MK2	1

*** TRANSISTORS ***

TR306	35003517	TR,2SA733/733A Q	1
TR305	35047217	TR,2SC945Q	1
TR201	35902911	TR,2SA 952 K	2
TR301	35962616	TR 2SD794P	3
TR307	35991210	FET	1

*** DIODES ***

D305	D306	D307 Δ	369K2106	DIODE SM-1A-02,AT	4
D308					
D301	D302	D303 Δ	369K2114	DIODE G2G AT	4
D304					
D310			369K5191	DIODE,ZENER RD13EB1(A),AT	1
D311			369K5192	DIODE,ZENER RD13EB2(A),AT	1
D312	D313		369K5198	DIODE,ZENER RD16EB2(A),AT	2
D203			369K5435	DIODE,ZENER RD9.1JB1,AT	1
D309			369K5461	DIODE ZENER RD20JB3,AT	1
D201	D202		36902087	DIODE.1SR35-100	2
D314			36904197	LED SLP-254B 1.2*6(G)	1

*** TRANSFORMERS ***

PT001	45019192	POWER TRNAS 35 IEC	1
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*** VARIABLE RESISTORS ***

VR201	41950513	R,VARIABLE 150KR2,500	1
VR202	41950518	R,VARIABLE 100K(C)X2	3

*** RELAYS & SWITCHES ***

S301	Δ	65904336	POWER SW SDL	1
S201		65904458	SWITCH PUSH 4KEY	1
S202		65904466	SWITCH PUSH (2KEY)	1

*** PWB ASSYS ***

	87F711U1	MAIN PWB UNI AUTO ASSY	1
	87F71101	MAIN PWB FULL ASSY	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
	87F71201	POWER PWB FULL ASSY	1

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

FU301	Δ	62910018	FM,ANTENNA,T,TYPE	1
FU302		66671003	FUSE1A T 250V SEMKO 20MM	1
FU201	FU202	66671005	FUSE2AT 250V SEMKO 20MM	1
PC001		66901069	FUSE2.5AF250V SEMKO 20MM	2
		70803020	LINE,CORD CENELEC 1.8M	1
CN302		70905600	JACK,HEADPHONE M1658	1
CN301		70905604	TERMINAL SPEAKER 4P	1
A021		71905104	TERMINAL	1
CN201	CN203	71905224	DIN SOKET 8P	2
CN101	CN202	71905226	2P RCA PINJACK L-カマ	2

*** APPEARANCE PARTS ***

A020	18292501	CLAMPER WIRE	1
A014	18293561	RUBBER FOOT (H=10.0)	4
A016	18358191	COVER BOTTOM	1
A001	18358201	CABINET	1
A012	18409341	SUB FRONT	1
A018	18604602	PLASTIC PLATE	1
	88F71631	FRONT PANEL S,ASSY	1

*** KNOBS & PUSH BUTTONS ***

A010	18469841	POWER BUTTON	1
A006	18475461	PUSH BUTTON (A)	4
A007	18476191	PUSH BUTTON(B)	2
A009	18476201	KNOB ROTARY(L)	3
A003	18476221	KNOB VARIABLE	1
A002	18476231	KNOB BALANCE	1

*** PRINTED & PACKING MATERIALS ***

	18811291	BAG,PROTECTION	1
	18812881	CARTON BOX	1
	18812981	FILLER CARTON	2
	19800672	BAG-B,POLYETHYLENE	1
	78916201	INSTRUCTION BOOKLET	1

*** RESISTORS ***

R249		40351125	R METAL 10H 5% 1W	1
R243	R244	40351157	R METAL 220H 5% 1W	2
R320		40351185	R METAL 3.3K 5% 1W	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
R321		40353175 R.METAL 1.2K 5% 3W	1
R307	R310	40809767 R.FUSE, 4.7H 1/4W 5%	2
R301	R313	40809771 R.FUSE, 10H 1/4W 2%	3
R230		40809783 R.FUSE 100H 1/4W 2%	1
R291		409H2601 R.CARBON 1.0H 5% 1/4W	1
R255	R256	409H2625 R.CARBON 10H 5% 1/4W	2
R205	R206	409H2651 R.CARBON 120H 5% 1/4W	2
R319	R330	409H2657 R.CARBON 220H 5% 1/4W	2
R285	R286	409H2662 R.CARBON 360H 5% 1/4	2
R115	R116	409H2665 R.CARBON 470H 5% 1/4W	3
R269	R270	409H2666 R.CARBON 510H 5% 1/4W	2
R291	R292	409H2668 R.CARBON 620H 5% 1/4W	2
R107	R108	409H2671 R.CARBON 820H 5% 1/4W	4
R114			
R257	R258	409H2677 R.CARBON 1.5K 5% 1/4W	2
R219	R220	409H2679 R.CARBON 1.8K 5% 1/4W	4
R224			
R103	R104	409H2681 R.CARBON 2.2K 5% 1/4W	9
R202	R250		
R311	R315		
R271	R272	409H2682 R.CARBON 2.4K 5% 1/4W	2
R275	R276	409H2687 R.CARBON 3.9K 5% 1/4W	4
R294			
R225	R226	409H2689 R.CARBON 4.7K 5% 1/4W	2
R207	R208	409H2691 R.CARBON 5.6K 5% 1/4W	2
R314	R317	409H2693 R.CARBON 6.8K 5% 1/4W	2
R251	R252	409H2697 R.CARBON 10K 5% 1/4W	2
R217	R218	409H2699 R.CARBON 12K 5% 1/4W	4
R246			
R253	R254	409H2701 R.CARBON 15K 5% 1/4W	2
R111	R112	409H2711 R.CARBON 39K 5% 1/4W	3
R203	R204	409H2715 R.CARBON 56K 5% 1/4W	2
R105	R106	409H2716 R.CARBON 62K 5% 1/4W	2
R221	R222	409H2719 R.CARBON 82K 5% 1/4W	2
R209	R210	409H2721 R.CARBON 100K 5% 1/4W	3
R101	R102	409H2729 R.CARBON 220K 5% 1/4W	4
R118			
R283	R284	409H2733 R.CARBON 330K 5% 1/4W	2
R109	R110	409H2737 R.CARBON 470K 5% 1/4W	4
R274			
R233	R234	40912125 R.CARBON 10H 5% 1/2W	2
R229	R231	40912173 R.CARBON 1.0K 5% 1/2W	2
R213	R214	40912181 R.CARBON 2.2K 5% 1/2W	4
R216			
R211		40913149 R.CARBON 100H 5% 1/4W	1

SYMBOL	PARTS NO	DESCRIPTION	QTY
*** CAPACITORS ***			
C127		421A0429 C.CERAMIC 50V 0.022UF	1
C221	C222	421A0433 C.CERAMIC 50V 0.047UF	2
C113	C114	421C0207 C.CERAMIC 50V 330PF	2
C105	C106	421C0209 C.CERAMIC 50V 470PF	4
C204			
C259		421C0221 C.CERAMIC 50V 4700PF	1
C269	C270	4213K219 C.CERAMIC 50V 3300PF	2
C241	C242	423A1055 C.CERAMIC 50V 270PF	2
C257	C258	429G6502 C.FILM 50V 1200PF 5%	2
C111	C112	429G6504 C.FILM 50V 1800PF 5%	2
C253	C254	429G6507 C.FILM 50V 3300PF 5%	2
C109	C110	429G6511 C.FILM 50V 6800PF 5%	4
C216			
C211	C212	429G6514 C.FILM 50V 12000PF 5%	2
C245	C246	429G6515 C.FILM 50V 0.015UF 5%	2
C247	C248	429G6519 C.FILM 50V 0.033UF 5%	2
C217	C218	429G6523 C.FILM 50V 0.068UF 5%	4
C244			
C213	C214	429G6526 C.FILM 50V 1.2UF 5%	2
C301		42910036 C.CERAMIC 400V 4700	1
C251	C252	4297F727 C.FILM 50V 0.15UF 5%	2
C302	C305	42974307 C.FILM 250V 0.1UF 10%	2
C103	C104	439H0057 C.ELEC 50V 4.7UF	2
C315	C316	439J3038 C.ELEC 25V 22UF	2
C107	C108	439J3040 C.ELEC 25V 47UF	2
C236		439J3041 C.ELEC 25V 100UF	1
C307	C308	439J3050 C.ELEC 35V 22UF	2
C309	C310	439J3051 C.ELEC 35V 33UF	4
C314			
C115	C116	439J3061 C.ELEC 50V 2.2UF	4
C202			
C209	C210	439J3064 C.ELEC 50V 10UF	6
C226	C228		
C317	C318	439J3066 C.ELEC 50V 33UF	2
C219	C220	439J3067 C.ELEC 50V 47UF	2
C303	C304	43910142 C.ELEC	2
C306		43910143 C.ELEC	1
C227		43991074 C.ELEC 50V 100UF	1
C207	C208	43993053 C.ELEC 35V 100UF	2